SEQUENCE LISTING BOLFRADEER INGELHEIM (CANADA) LTD. <120> SELF REPLICATING RNA MOLECULE FROM **HEPATITIS C VIRUS** <130> 13/083-2-C1 <140> 10/686,835 <141> 2003-10-16 <150> 10/029,907 <151> 2001-12-21 <150> 60/257,857 <151> 2000-12-22 <160> 28 <170> FastSEQ for Windows Version 4.0 <210> 1 <211> 8639 <212> DNA <213> HCV <220> <221> CDS <222> (1803)...(8408) ggccagcccc cgattggggg cgacactcca ccatagatca ctcccctgtg aggaactact 60 gtcttcacgc agaaagcgtc tagccatggc gttagtatga gtgtcgtgca gcctccagga 120 gtcttcacgc agaaagcgtc tagccatggc gttagtatga gtgtcgtgca gcctccagga 120 cccccctcc cgggagagcc atagtggtct gcggaaccgg tgagtacacc ggaattgcca 180 ggacgaccgg gtcctttctt ggatcaaccc gctcaatgcc tggagatttg ggcgtgcccc 240 cgcgagactg ctagccgagt agtgttgggt cgcgaaaggc cttgtggtac tgcctgatag 300 ggtgcttgcg agtgccccgg gaggtctcgt agaccgtgca ccatgagcac gaatcctaaa 360 cctcaaagaa aaaccaaagg gcgcgccatg attgaacaag atggattgca cgcaggttct 420 ccggccgctt gggtggagag gctattcggc tatgactggg cacaacagac aatcggctgc 480 tctgatgccg ccgtgtccg gctgtcagcg caggggcgcc cggttcttt tgtcaagacc 540 gacctgtccg gtgccctgaa tgaactgcag gacgaggcag cgcggctatc gtggctggcc 600 acgacgggcg ttccttgcgc agctgtgct gacgttgtca ctgaagcggg aagggactgg 660 ctgctattgg gcgaaotgc agggaactga ctcctaca ctcaccttac tcctoccaa 720 acgacgggcg ttccttgcgc agctgtgctc gacgttgtca ctgaagcggg aagggactgg 660 ctgctattgg gcgaagtgcc ggggcaggat ctcctgtcat ctcaccttgc tcctgccgag 720 aaagtatcca tcatggctga tgcaatgcgg cggctgcata cgcttgatcc ggctacctgc 780 ccattcgacc accaagcgaa acatcgcatc gagcgagcac gtactcggat ggaagccggt 840 cttgtcgatc aggatgatct ggacgaagag catcaggggc tcgcgccagc cgaactgttc 900 gccaggctca aggcgcgcat gcccgacggc gaggatctcg tcgtgaccca tggcgatgcc 960 tgcttgccga atatcatggt ggaaaatggc cgcttttctg gattcatcga ctgtggccgg 1020 ctgggtgtgg cggaccgcta tcaggacata gcgttggcta cccgtgatat tgctgaagag 1080 cttggcggcg aatgggctga ccgcttctc gtgcttacg gtatcgcgc ccagatgtta 1200 acagaccaca acggttccc tctagcgga tcaattccgc ccccccct aacggttacta 1260

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tcc caa cag acg c Ser Gln Gln Thr A 225	ga ggc cta ctt rg Gly Leu Leu 230	ggc tgc atc atc ac Gly Cys Ile Ile Th 235		2519
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Ala	Thr	Gln	Ser	Phe 260	Leu	Ala	Thr	Cys	Va1 265	Asn	GТу	٧a٦	Cys	Trp 270	Thr	
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Аlа	Glu	Leu	Ala	Thr 1540	Lys)	Thr	Phe	Gly	Ser 1545		Glu	Ser	Ser	Ala 1550	val)	
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Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn Cys Gly Tyr Arg Arg

Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr

Cys Tyr Leu Lys Ala Ala Ala Cys Arg Ala Ala Lys Leu Gln Asp

1880

1895

1860

1875

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1885

acct cgac taagt catt ccag gcag gcag gcag	gtcc gggc attg atcc ccgat ggctc gctc gct	gg t to consider the consideration of the considera	gccc cctt gaag caag gatca ggatca ggacca ttct ggaa cccca gaag ccaag ccaag gcaag	ttgaacgeggggggaatcggggggaatcggggggaatcgggggggaatcgggggggg	at gasta gas	actorics actorics actorics actorics actorics according a	gcagg gctcg ggatc gcgagc catag ggaat catag ggaat catag ggaat catag ggaat catag ggaat	account accoun	gaggo gttgt ttgto ttgco caggo gatto ctttto ttgto caggo ttgto caggo ggtti ggtti ggtti	agc catc lact gcgt ttacg ctcgt cctc gcat cctg aagg gaca tacg	gcggaacttcacttcacctacttcaccaccttcaccaccttcaccac	getati gegg cette gate gate gate cecec cecec tatti tatti agata gata gata gata gata g	icg tagged and and and and and and and and and an	agget aggga cetge getge aggetge cegatt cegage teegage	agaccg aggcca actggc actgcc actgcc actgcc accaggc actatc actatc actatc gcagcc gcagcc actatc gcagcc gcagcc gcagcc gcagcc gcagcc gcagcc gcagcc gcagcc gcacca gcagcc gcacca gcaca gcaca gcaca gcac	660 720 780 840 900 1020 1020 1140 1260 1320 1380 1560 1620 1680 1740 1800
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tgg cgg acc ctc g Trp Arg Thr Leu G 945	aa gcc ttc tgg lu Ala Phe Trp 950	gcg aag cat a Ala Lys His I 955	atg tgg aat Met Trp Asn	ttc atc Phe Ile 960	4681
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acc acc caa cat a Thr Thr Gln His T 995	cc ctc ctg ttt hr Leu Leu Phe 1000	Asn Ile Leu (ggg gga tgg Gly Gly Trp 1005	gtg gcc Val Ala	4825
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Ser Pro Thr His T	yr Val Pro Glu 125 gt ctt acc atc	Ser Asp Ala / 1130 act cag ctg	Ala Ala Arg ctg aag agg	Val Thr 1135 ctt cac Leu His	5209 5257
Ser Pro Thr His T 1 cag atc ctc tct a Gln Ile Leu Ser S	yr Val Pro Glu 125 gt ctt acc atc er Leu Thr Ile	act cag ctg Thr Gln Leu 1145 acg cca tgc Thr Pro Cys	Ala Ala Arg ctg aag agg Leu Lys Arg 1150	val Thr 1135 ctt cac Leu His)	
cag atc ctc tct a Gln Ile Leu Ser S 1140 cag tgg atc aac g Gln Trp Ile Asn G	yr Val Pro Glu 125 gt ctt acc atc er Leu Thr Ile ag gac tgc tcc lu Asp Cys Ser 1160 at tgg ata tgc	act cag ctg Thr Gln Leu 1145 acg cca tgc Thr Pro Cys acg gtg ttg Thr Val Leu	ctg aag agg Leu Lys Arg 1150 tcc ggc tcg Ser Gly Ser 1165 act gat ttc	val Thr 1135 ctt cac Leu His) tgg cta Trp Leu aag gcc	5257

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1955	1960	1965

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Leu Ile Leu Leu Thr Leu Ser Pro His Tyr Lys Leu Phe Leu Ala Arg
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35 40 45
                                                                                                                                 1945
caa gtg tgg atc ccc ccc ctc aac gtt cgg ggg ggc cgc gat gcc gtc
Gln Val Trp Ile Pro Pro Leu Asn Val Arg Gly Gly Arg Asp Ala Val
50 60
                                                                                                                                 1993
                                                                                                                                  2041
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Ile Leu Leu Thr Cys Ala Ile His Pro Glu Leu Ile Phe Thr Ile Thr
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		~~~	~~~	225	++~		+	cta	ata	aca	tac	cad	act	3.C.U	ata	4153
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atg Met	cag Gln	ctc Leu 915	gcc Ala	gaa Glu	caa Gln	ttc Phe	aaa Lys 920	cag Gln	aag Lys	gca Ala	atc Ile	ggg Gly 925	ttg Leu	ctg Leu	caa Gln	4585
aca Thr	gcc Ala 930	acc Thr	aag Lys	caa Gln	gcg Ala	gag Glu 935	gct Ala	gct Ala	gct Ala	ccc Pro	gtg Val 940	gtg Val	gaa Glu	tcc Ser	aag Lys	4633
tgg Trp 945	cgg Arg	acc Thr	ctc Leu	gaa Glu	gcc Ala 950	ttc Phe	tgg Trp	gcg Ala	aag Lys	cat His 955	atg Met	tgg Trp	aat Asn	ttc Phe	atc Ile 960	4681
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gcg Ala	ata Ile	gca Ala	tca Ser 980	ctg Leu	atg Met	gca Ala	ttc Phe	aca Thr 985	gcc Ala	tct Ser	atc Ile	acc Thr	agc Ser 990	ccg Pro	ctc Leu	4777
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gcc Ala	caa Gln 1010	Leu	gct Ala	cct Pro	ccc Pro	agc Ser 101	Ala	gct Ala	tct Ser	gct Ala	ttc Phe 1020	va I	ggc Gly	gcc Ala	ggc Gly	4873

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gat att ttg gca ggt tat gga gca ggg gtg gca ggc gcg ctc gtg gcc 49 Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val Ala 1045 1050 1055	969
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Pro Gln Ala Val Met	Gly Ser Ser Tyr	Gly Phe Gln Tyr Ser Pro Gly	
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cag cgg gtc gag ttc	ctg gtg aat gcc	tgg aaa gcg aag aaa tgc cct	7273
Gln Arg Val Glu Phe	Leu Val Asn Ala	Trp Lys Ala Lys Lys Cys Pro	
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Met Gly Phe Ala Tyr	Asp Thr Arg Cys	Phe Asp Ser Thr Val Thr Glu	
1825	1830	1835 1840	
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1875	1880	1885	
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Cys Arg Ala Ser Gly	Val Leu Thr Thr	Ser Cys Gly Asn Thr Leu Thr	
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Cys Tyr Leu Lys Ala	Ala Ala Ala Cys	Arg Ala Ala Lys Leu Gln Asp	
1905	1910	1915 1920	
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gcg ggg acc caa gag Ala Gly Thr Gln Gli 1940	gac gag gcg agc Asp Glu Ala Ser 194	Leu Arg Ala Phe Thr Glu Ala	7657
atg act aga tac tct	gcc ccc cct ggg	gac ccg ccc aaa cca gaa tac	7705
Met Thr Arg Tyr Ser	Ala Pro Pro Gly	Asp Pro Pro Lys Pro Glu Tyr	
1955	1960	1965	
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Asp Leu Glu Leu Ile	Thr Ser Cys Ser	Ser Asn Val Ser Val Ala His	
1970	1975	1980	
gat gca tct ggc aaa	agg gtg tac tat	ctc acc cgt gac ccc acc acc	7801
Asp Ala Ser Gly Lys	Arg Val Tyr Tyr	Leu Thr Arg Asp Pro Thr Thr	
1985	1990	1995 2000	
ccc ctt gcg cgg gct Pro Leu Ala Arg Ala 200	. Ala Trp Glu Thr	gct aga cac act cca gtc aat Ala Arg His Thr Pro Val Asn 2010 2015	7849
			7897
tcc tgg cta ggc aad Ser Trp Leu Gly Asr 2020	atc atc atg tat Ile Ile Met Tyr 202	Ala Pro Thr Leu Trp Ala Arg	

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tca tgc ctc agg aaa ctt ggg gta ccg ccc ttg cga gtc tgg aga cat 8137 Ser Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Val Trp Arg His 2100 2105 2110
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gtc Val	tcc Ser	gcc Ala 195	cgc Arg	agg Arg	ggg Gly	agg Arg	gag Glu 200	ata Ile	cat His	ctg Leu	gga Gly	ccg Pro 205	gca Ala	gac Asp	agc Ser	2425
ctt Leu	gaa Glu 210	ggg Gly	cag Gln	ggg Gly	tgg Trp	cga Arg 215	ctc Leu	ctc Leu	gcg Ala	cct Pro	att Ile 220	acg Thr	gcc Ala	tac Tyr	tcc Ser	2473
caa Gln 225	cag Gln	acg Thr	cga Arg	ggc Gly	cta Leu 230	ctt Leu	ggc Gly	tgc Cys	atc Ile	atc Ile 235	acc Thr	agc Ser	ctc Leu	aca Thr	ggc Gly 240	2521
cgg Arg	gac Asp	agg Arg	aac Asn	cag Gln 245	gtc Val	gag Glu	ggg Gly	gag Glu	gtc Val 250	caa Gln	gtg Val	gtc Val	tcc Ser	acc Thr 255	gca Ala	2569
aca Thr	caa Gln	tct Ser	ttc Phe 260	ctg Leu	gcg Ala	acc Thr	tgc Cys	gtc Val 265	aat Asn	ggc Gly	gtg Val	tgt Cys	tgg Trp 270	act Thr	gtc val	2617
tat Tyr	cat His	ggt Gly 275	gcc Ala	ggc Gly	tca Ser	aag Lys	acc Thr 280	ctt Leu	gcc Ala	ggc Gly	cca Pro	aag Lys 285	ggc Gly	cca Pro	atc Ile	2665
acc Thr	caa Gln 290	atg Met	tac Tyr	acc Thr	aat Asn	gtg Val 295	gac Asp	cag Gln	gac Asp	ctc Leu	gtc Val 300	ggc Gly	tgg Trp	caa Gln	gcg Ala	2713
ccc Pro 305	ccc Pro	ggg Gly	gcg Ala	cgt Arg	tcc ser 310	ttg Leu	aca Thr	cca Pro	tgc Cys	acc Thr 315	tgc Cys	ggc Gly	agc Ser	tcg Ser	gac Asp 320	2761
ctt Leu	tac Tyr	ttg Leu	gtc Val	acg Thr 325	aag Lys	cat His	gcc Ala	gat Asp	gtc Val 330	att Ile	ccg Pro	gtg Val	cgc Arg	cgg Arg 335	cgg Arg	2809
ggc Gly	gac Asp	agc Ser	agg Arg 340	ggg Gly	agc Ser	cta Leu	ctc Leu	tcc Ser 345	ccc Pro	cgg Arg	ccc Pro	gtc Val	tcc Ser 350	tac Tyr	ttg Leu	2857
aag Lys	ggc Gly	tct Ser 355	tcg Ser	ggc Gly	ggt Gly	cca Pro	ctg Leu 360	ctc Leu	tgc Cys	ccc Pro	tcg Ser	ggg Gly 365	cac His	gct Ala	gtg Val	2905
ggc Gly	atc Ile 370	ttt Phe	cgg Arg	gct Ala	gcc Ala	gtg Val 375	tgc Cys	acc Thr	cga Arg	ggg Gly	gtt Val 380	gcg Ala	aag Lys	gcg Ala	gtg Val	2953
gac Asp 385	ttt Phe	gta Val	ccc Pro	gtc val	gag Glu 390	tct Ser	atg Met	gaa Glu	acc Thr	act Thr 395	atg Met	cgg Arg	tcc Ser	ccg Pro	gtc Val 400	3001
ttc Phe	acg Thr	gac Asp	aac Asn	tcg Ser 405	tcc Ser	cct Pro	ccg Pro	gcc Ala	gta Val 410	ccg Pro	cag Gln	aca Thr	ttc Phe	cag Gln 415	gtg Val	3049
gcc Ala	cat His	cta Leu	cac His 420	gcc Ala	cct Pro	act Thr	ggt Gly	agc Ser 425	ggc Gly	aag Lys	agc Ser	act Thr	aag Lys 430	gtg Val	ccg Pro	3097

gct Ala	gcg Ala	tat Tyr 435	gca Ala	gcc Ala	caa Gln	ggg Gly	tat Tyr 440	aag Lys	gtg Val	ctt Leu	gtc Val	ctg Leu 445	aac Asn	ccg Pro	tcc Ser	3145
gtc Val	gcc Ala 450	gcc Ala	acc Thr	cta Leu	ggt Gly	ttc Phe 455	ggg Gly	gcg Ala	tat Tyr	atg Met	tct Ser 460	aag Lys	gca Ala	cat His	ggt Gly	3193
atc Ile 465	gac Asp	cct Pro	aac Asn	atc Ile	aga Arg 470	acc Thr	ggg Gly	gta Val	agg Arg	acc Thr 475	atc Ile	acc Thr	acg Thr	ggt Gly	gcc Ala 480	3241
ccc Pro	atc Ile	acg Thr	tac Tyr	tcc Ser 485	acc Thr	tat Tyr	ggc Gly	aag Lys	ttt Phe 490	ctt Leu	gcc Ala	gac Asp	ggt Gly	ggt Gly 495	tgc Cys	3289
tct Ser	ggg Gly	ggc Gly	gcc Ala 500	tat Tyr	gac Asp	atc Ile	ata Ile	ata Ile 505	tgt Cys	gat Asp	gag Glu	tgc Cys	cac His 510	tca Ser	act Thr	3337
gac Asp	tcg Ser	acc Thr 515	act Thr	atc Ile	ctg Leu	ggc Gly	atc Ile 520	ggc Gly	aca Thr	gtc Val	ctg Leu	gac Asp 525	caa Gln	gcg Ala	gag Glu	3385
acg Thr	gct Ala 530	gga Gly	gcg Ala	cga Arg	ctc Leu	gtc Val 535	gtg Val	ctc Leu	gcc Ala	acc Thr	gct Ala 540	acg Thr	cct Pro	ccg Pro	gga Gly	3433
tcg Ser 545	gtc Val	acc Thr	gtg Val	cca Pro	cat His 550	cca Pro	aac Asn	atc Ile	gag Glu	gag Glu 555	gtg Val	gct Ala	ctg Leu	tcc Ser	agc Ser 560	3481
act Thr	gga Gly	gaa Glu	atc Ile	ccc Pro 565	ttt Phe	tat Tyr	ggc Gly	aaa Lys	gcc Ala 570	atc Ile	ccc Pro	atc Ile	gag Glu	acc Thr 575	atc Ile	3529
aag Lys	ggg Gly	ggg Gly	agg Arg 580	cac His	ctc Leu	att Ile	ttc Phe	tgc Cys 585	cat His	tcc Ser	aag Lys	aag Lys	aaa Lys 590	tgc Cys	gat Asp	3577
gag Glu	ctc Leu	gcc Ala 595	gcg Ala	aag Lys	ctg Leu	tcc Ser	ggc Gly 600	ctc Leu	gga Gly	ctc Leu	aat Asn	gct Ala 605	gta Val	gca Ala	tat Tyr	3625
tac Tyr	cgg Arg 610	ggc Gly	ctt Leu	gat Asp	gta Val	tcc ser 615	gtc val	ata Ile	cca Pro	act Thr	agc Ser 620	gga Gly	gac Asp	gtc Val	att Ile	3673
gtc Val 625	gta Val	gca Ala	acg Thr	gac Asp	gct Ala 630	cta Leu	atg Met	acg Thr	ggc Gly	ttt Phe 635	acc Thr	ggc Gly	gat Asp	ttc Phe	gac Asp 640	3721
tca Ser	gtg val	atc Ile	gac Asp	tgc Cys 645	aat Asn	aca Thr	tgt Cys	gtc Val	acc Thr 650	cag Gln	aca Thr	gtc Val	gac Asp	ttc Phe 655	agc Ser	3769
ctg Leu	gac Asp	ccg Pro	acc Thr 660	ttc Phe	acc Thr	att Ile	gag Glu	acg Thr 665	acg Thr	acc Thr	gtg Val	cca Pro	caa Gln 670	gac Asp	gcg Ala	3817
gtg Val	tca Ser	cgc Arg 675	tcg Ser	cag Gln	cgg Arg	cga Arg	ggc Gly 680	agg Arg	act Thr	ggt Gly	agg Arg	ggc Gly 685	agg Arg	atg Met	ggc Gly	3865

att t Ile T	tac Tyr 690	agg Arg	ttt Phe	gtg Val	act Thr	cca Pro 695	gga Gly	gaa Glu	cgg Arg	ccc Pro	tcg Ser 700	ggc Gly	atg Met	ttc Phe	gat Asp	3913
tcc t Ser S 705	tcg Ser	gtt Val	ctg Leu	tgc Cys	gag Glu 710	tgc Cys	tat Tyr	gac Asp	gcg Ala	ggc Gly 715	tgt Cys	gct Ala	tgg Trp	tac Tyr	gag Glu 720	3961
ctc a Leu T	acg Thr	ccc Pro	gcc Ala	gag Glu 725	acc Thr	tca Ser	gtt Val	agg Arg	ttg Leu 730	cgg Arg	gct Ala	tac Tyr	cta Leu	aac Asn 735	aca Thr	4009
cca g Pro G	ggg Gly	ttg Leu	ccc Pro 740	gtc Val	tgc Cys	cag Gln	gac Asp	cat His 745	ctg Leu	gag Glu	ttc Phe	tgg Trp	gag Glu 750	ggc Gly	gtc Val	4057
ttt a Phe T	aca Thr	ggc G1y 755	ctc Leu	acc Thr	cac His	ata Ile	gac Asp 760	gcc Ala	cat His	ttc Phe	ttg Leu	tcc Ser 765	cag Gln	act Thr	aag Lys	4105
cag g Gln A	gca 41a 770	gga Gly	gac Asp	aac Asn	ttc Phe	ccc Pro 775	tac Tyr	ctg Leu	gta Val	gca Ala	tac Tyr 780	cag Gln	gct Ala	acg Thr	gtg Val	4153
tgc g Cys A 785	gcc Ala	agg Arg	gct Ala	cag Gln	gct Ala 790	cca Pro	cct Pro	cca Pro	tcg Ser	tgg Trp 795	gac Asp	caa Gln	atg Met	tgg Trp	aag Lys 800	4201
tgt c Cys L	ctc Leu	ata Ile	cgg Arg	cta Leu 805	aag Lys	cct Pro	acg Thr	ctg Leu	cac His 810	ggg Gly	cca Pro	acg Thr	ccc Pro	ctg Leu 815	ctg Leu	4249
tat a Tyr A	agg Arg	ctg Leu	gga Gly 820	gcc Ala	gtt Val	caa Gln	aac Asn	gag Glu 825	gtt Val	act Thr	acc Thr	aca Thr	cac His 830	ccc Pro	ata Ile	4297
acc a Thr L	aaa Lys	tac Tyr 835	atc Ile	atg Met	gca Ala	tgc Cys	atg Met 840	tcg Ser	gct Ala	gac Asp	ctg Leu	gag Glu 845	gtc Val	gtc val	acg Thr	4345
agc a Ser T	acc Thr 850	tgg Trp	gtg val	ctg Leu	gta Val	ggc Gly 855	gga Gly	gtc val	cta Leu	gca Ala	gct Ala 860	ctg Leu	gct Ala	gcg Ala	tat Tyr	4393
tgc c Cys L 865	ctg Leu	aca Thr	aca Thr	ggc Gly	agc Ser 870	gtg val	gtc val	att Ile	gtg Val	ggc Gly 875	agg Arg	atc Ile	atc Ile	ttg Leu	tcc Ser 880	4441
gga a Gly A	agg Arg	ccg Pro	gcc Ala	atc Ile 885	att Ile	ccc Pro	gac Asp	agg Arg	gaa Glu 890	gtc Val	ctt Leu	tac Tyr	cgg Arg	gag Glu 895	ttc Phe	4489
gat g Asp G	gag Glu	atg Met	gaa Glu 900	gag Glu	tgt Cys	gcc Ala	tca Ser	cac His 905	ctc Leu	cct Pro	tac Tyr	atc Ile	gaa Glu 910	cag Gln	gga Gly	4537
atg o	cag Gln	ctc Leu 915	gcc Ala	gaa Glu	caa Gln	ttc Phe	aaa Lys 920	cag Gln	aag Lys	gca Ala	atc Ile	ggg Gly 925	ttg Leu	ctg Leu	caa Gln	4585
aca g Thr A	gcc Ala 930	acc Thr	aag Lys	caa Gln	gcg Ala	gag Glu 935	gct Ala	gct Ala	gct Ala	ccc Pro 56	gtg Val 940	gtg Val	gaa Glu	tcc Ser	aag Lys	4633

tgg Trp 945	cgg Arg	acc Thr	ctc Leu	gaa Glu	gcc Ala 950	ttc Phe	tgg Trp	gcg Ala	aag Lys	cat His 955	atg Met	tgg Trp	aat Asn	ttc Phe	atc Ile 960	4681
agc Ser	ggg Gly	ata Ile	caa Gln	tat Tyr 965	tta Leu	gca Ala	ggc Gly	ttg Leu	tcc Ser 970	act Thr	ctg Leu	cct Pro	ggc Gly	aac Asn 975	ccc Pro	4729
gcg Ala	ata Ile	gca Ala	tca Ser 980	ctg Leu	atg Met	gca Ala	ttc Phe	aca Thr 985	gcc Ala	tct Ser	atc Ile	acc Thr	agc Ser 990	ccg Pro	ctc Leu	4777
acc Thr	acc Thr	caa Gln 995	His	acc Thr	ctc Leu	ctg Leu	ttt Phe 1000	Asn	atc Ile	ctg Leu	ggg Gly	gga Gly 100!	Trp	gtg val	gcc Ala	4825
gcc Ala	caa Gln 1010	Leu	gct Ala	cct Pro	ccc Pro	agc Ser 101	Āla	gct Ala	tcc Ser	gct Ala	ttc Phe 1020	٧al	ggc Gly	gcc Ala	ggc Gly	4873
atc Ile 1025	Ala	gga Gly	gcg Ala	gct Ala	gtt Val 1030	ggc Gly )	agc Ser	ata Ile	ggc Gly	ctt Leu 1035	Gly	aag Lys	gtg Val	ctt Leu	gtg Val 1040	4921
gat Asp	att Ile	ttg Leu	gca Ala	ggt Gly 104	tat Tyr	gga Gly	gca Ala	ggg Gly	gtg Val 1050	gca Ala )	ggc Gly	gcg Ala	ctc Leu	gtg val 105!	gcc Ala	4969
ttt Phe	aag Lys	gtc Val	atg Met 1060	Ser	ggc Gly	gag Glu	atg Met	ccc Pro 106	Ser	acc Thr	gag Glu	gac Asp	ctg Leu 1070	Val	aac Asn	5017
cta Leu	ctc Leu	cct Pro 1075	Ala	atc Ile	ctc Leu	tcc Ser	cct Pro 1080	Gly	gcc Ala	cta Leu	gtc Val	gtc Val 108!	Gly	gtc val	gtg Val	5065
tgc Cys	gca Ala 1090		ata Ile	ctg Leu	cgt Arg	cgg Arg 1095	cac His	gtg Val	ggc Gly	cca Pro	ggg Gly 1100	gag Glu )	ggg Gly	gct Ala	gtg Val	5113
cag Gln 1105	Trp	atg Met	aac Asn	cgg Arg	ctg Leu 111(	ata Ile )	gcg Ala	ttc Phe	gct Ala	tcg Ser 111	Arg	ggt Gly	aac Asn	cac His	gtc Val 1120	5161
tcc Ser	ccc Pro	acg Thr	cac His	tat Tyr 112	٧a٦	cct Pro	gag Glu	agc Ser	gac Asp 1130	Ala	gca Ala	gca Ala	cgt Arg	gtc Val 113	Thr	5209
cag Gln	atc Ile	ctc Leu	tct Ser 1140	Ser	ctt Leu	acc Thr	atc Ile	act Thr 114!	Gln	ctg Leu	ctg Leu	aag Lys	agg Arg 1150	Leu	cac His	5257
cag Gln	tgg Trp	atc Ile 115	Asn	gag Glu	gac Asp	tgc Cys	tcc Ser 1160	Thr	cca Pro	tgc Cys	tcc Ser	ggc Gly 116	Ser	tgg Trp	cta Leu	5305
aga Arg	gat Asp 1170	Val	tgg Trp	gat Asp	tgg Trp	ata Ile 117	Cys	acg Thr	gtg Val	ttg Leu	act Thr 1180	Asp	ttc Phe	aag Lys	gcc Ala	5353
tgg Trp 1185	Leu	cag Gln	tcc Ser	aag Lys	ctc Leu 1190	ctg Leu )	ccg Pro	cga Arg	ttg Leu	ccg Pro 1195 57	Gly	gtc val	ccc Pro	ttc Phe	ttc Phe 1200	5401

tca tgt caa cgt Ser Cys Gln Arg	ggg tac aag Gly Tyr Lys 1205	gga gtc tgg Gly Val Trp 121	Arg Gly Asp	ggc atc atg Gly Ile Met 1215	5449
caa acc acc tgc Gln Thr Thr Cys 1220	Pro Cys Gly	gca cag ato Ala Gln Ile 1225	acc gga cat Thr Gly His	gtg aaa aac Val Lys Asn 1230	5497
tgt tcc atg agg Cys Ser Met Arg 1235	atc gtg ggg Ile Val Gly	cct agg acc Pro Arg Thr 1240	tgt agt aac Cys Ser Asn 124	acg tgg cat Thr Trp His S	5545
gga aca ttc ccc Gly Thr Phe Pro 1250	att aac gcg Ile Asn Ala 1259	_Tyr Thr Thr	ggc ccc tgc Gly Pro Cys 1260	acg ccc tcc Thr Pro Ser	5593
ccg gcg cca aat Pro Ala Pro Asn 1265	tat tct agg Tyr Ser Arg 1270	gcg ctg tgg Ala Leu Trp	cgg gtg gct Arg Val Ala 1275	gct gag gag Ala Glu Glu 1280	5641
tac gtg gag gtt Tyr Val Glu Val	acg cga gtg Thr Arg Val 1285	ggg gat tto Gly Asp Phe 129	HIS Tyr Val	acg ggc atg Thr Gly Met 1295	5689
acc act gac aac Thr Thr Asp Asn 1300	Val Lys Cys	ccg tgt cag Pro Cys Gln 1305	gtt ccg gcc Val Pro Ala	ccc gaa ttc Pro Glu Phe 1310	5737
ttc aca gaa gtg Phe Thr Glu Val 1315	gat ggg gtg Asp Gly Val	cgg ttg cac Arg Leu His 1320	agg tac gct Arg Tyr Ala 132	Pro Ala Cys	5785
aaa ccc ctc cta Lys Pro Leu Leu 1330	cgg gag gag Arg Glu Glu 133	_Val Thr Phe	ctg gtc ggg Leu Val Gly 1340	ctc aat caa Leu Asn Gln	5833
tac ccg gtt ggg Tyr Pro Val Gly 1345	tca cag ctc Ser Gln Leu 1350	cca tgc gag Pro Cys Glu	ccc gaa ctg Pro Glu Leu 1355	gac gta gca Asp Val Ala 1360	5881
gtg ctc act tcc Val Leu Thr Ser	atg ctc acc Met Leu Thr 1365	gac ccc tcc Asp Pro Ser 137	His Ile Thr	gcg gag acg Ala Glu Thr 1375	5929
gct aag cgt agg Ala Lys Arg Arg 1380	Leu Ala Arg	gga tct ccc Gly Ser Pro 1385	ccc tcc ttg Pro Ser Leu	gcc agc tca Ala Ser Ser 1390	5977
tca gct agc cag Ser Ala Ser Gln 1395	ctg tct gcg Leu Ser Ala	cct tcc ttg Pro Ser Leu 1400	aag gca aca Lys Ala Thr 140	Cys Thr Thr	6025
cgt cat gac tcc Arg His Asp Ser 1410	ccg gac gct Pro Asp Ala 141	Asp Leu Ile	gag gcc aac Glu Ala Asn 1420	ctc ctg tgg Leu Leu Trp	6073
cgg cag gag atg Arg Gln Glu Met 1425	ggc ggg aac Gly Gly Asn 1430	atc acc cgc Ile Thr Arg	gtg gag tca Val Glu Ser 1435	gag aat aag Glu Asn Lys 1440	6121
gta gta att ttg Val Val Ile Leu	gac tct ttc Asp Ser Phe 1445	gag ccg ctc Glu Pro Leu 145	Gln Ala Glu	gag gat gag Glu Asp Glu 1455	6169

agg gaa gta to Arg Glu Val Se 14	c gtt ccg gcg r Val Pro Ala 60	gag atc ctg Glu Ile Leu 1465	cgg agg tcc Arg Arg Ser	agg aaa t Arg Lys P 1470	tc 6217 he
cct cga gcg at Pro Arg Ala Me 1475	g ccc ata tgg t Pro Ile Trp	gca cgc ccg Ala Arg Pro 1480	gat tac aac Asp Tyr Asn 148	Pro Pro L	tg 6265 eu
tta gag tcc tg Leu Glu Ser Tr 1490	g aag gac ccg p Lys Asp Pro 149	Asp Tyr Val	cct cca gtg Pro Pro Val 1500	gta cac g Val His G	gg 6313 ly
tgt cca ttg cc Cys Pro Leu Pr 1505	g cct gcc aag o Pro Ala Lys 1510	gcc cct ccg Ala Pro Pro	ata cca cct Ile Pro Pro 1515	Pro Arg A	gg 6361 rg 520
aag agg acg gt Lys Arg Thr Va	t gtc ctg tca 1 Val Leu Ser 1525	gaa tct acc Glu Ser Thr 153	Val Ser Ser	gcc ttg g Ala Leu A 1535	cg 6409 la
gag ctc gcc ac Glu Leu Ala Th 15	a aag acc ttc r Lys Thr Phe 40	ggc agc tcc Gly Ser Ser 1545	gaa tcg tcg Glu Ser Ser	gcc gtc g Ala Val A 1550	ac 6457 sp
agc ggc acg gc Ser Gly Thr Al 1555	a acg gcc tct a Thr Ala Ser	cct gac cag Pro Asp Gln 1560	ccc tcc gac Pro Ser Asp 156	_ASP GIY A	ac 6505 sp
gcg gga tcc ga Ala Gly Ser As 1570	c gtt gag tcg p Val Glu Ser 157	Tyr Ser Ser	atg ccc ccc Met Pro Pro 1580	ctt gag g Leu Glu G	gg 6553 ly
gag ccg ggg ga Glu Pro Gly As 1585	t ccc gat ctc p Pro Asp Leu 1590	agc gac ggg Ser Asp Gly	tct tgg tct Ser Trp Ser 1595	ınr val Ş	gc 6601 er 600
gag gag gct ag Glu Glu Ala Se	t gag gac gtc r Glu Asp Val 1605	gtc tgc tgc Val Cys Cys 161	Ser Met Ser	tac aca t Tyr Thr T 1615	gg 6649 rp
aca ggc gcc ct Thr Gly Ala Le	g atc acg cca u Ile Thr Pro 20	tgc gct gcg Cys Ala Ala 1625	gag gaa acc Glu Glu Thr	aag ctg c Lys Leu P 1630	cc 6697 ro
atc aat gca ct Ile Asn Ala Le 1635	g agc aac tct u Ser Asn Ser	ttg ctc cgt Leu Leu Arg 1640	cac cac aac His His Asn 164	Leu vai i	at 6745 yr
gct aca aca to Ala Thr Thr Se 1650	t cgc agc gca r Arg Ser Ala 165	_Ser Leu Arg	cag aag aag Gln Lys Lys 1660	gtc acc t Val Thr P	tt 6793 he
gac aga ctg ca Asp Arg Leu Gl 1665	g gtc ctg gac n Val Leu Asp 1670	gac cac tac Asp His Tyr	cgg gac gtg Arg Asp Val 1675	Leu Lys G	ag 6841 Tu 680
atg aag gcg aa Met Lys Ala Ly	g gcg tcc aca s Ala Ser Thr 1685	gtt aag gct Val Lys Ala 169	Lys Leu Leu	tcc gtg g Ser Val G 1695	ag 6889 Tu
gaa gcc tgt aa Glu Ala Cys Ly 17	ng ctg acg ccc vs Leu Thr Pro voo	cca cat tcg Pro His Ser 1705	gcc aga tct Ala Arg Ser 59	aaa ttt g Lys Phe G 1710	gc 6937 1y

tat ggg gca aag g Tyr Gly Ala Lys A 1715	gac gtc cgg aac Asp Val Arg Asn 172	Leu Ser Ser	aag gcc gtt Lys Ala Val 1725	aac cac 6985 Asn His
atc cgc tcc gtg t Ile Arg Ser Val T 1730	tgg aag gac ttg Frp Lys Asp Leu 1735	ctg gaa gac Leu Glu Asp	act gag aca Thr Glu Thr 1740	cca att 7033 Pro Ile
gac acc acc atc a Asp Thr Thr Ile M 1745	atg gca aaa aat Met Ala Lys Asn 1750	gag gtt ttc Glu Val Phe 175	Cys Val Gin	cca gag 7081 Pro Glu 1760
aag ggg ggc cgc a Lys Gly Gly Arg L	aag cca gct cgc Lys Pro Ala Arg 1765	ctt atc gta Leu Ile Val 1770	ttc cca gat Phe Pro Asp	ttg ggg 7129 Leu Gly 1775
gtt cgt gtg tgc g val Arg Val Cys 0 1780	gag aaa atg gcc Glu Lys Met Ala	ctt tac gat Leu Tyr Asp 1785	gtg gtc tcc Val Val Ser 1790	Thr Leu
cct cag gcc gtg a Pro Gln Ala Val M 1795	atg ggc tct tca Met Gly Ser Ser 180	Tyr Gly Phe	caa tac tct Gln Tyr Ser 1805	cct gga 7225 Pro Gly
cag cgg gtc gag t Gln Arg Val Glu F 1810	ttc ctg gtg aat Phe Leu Val Asn 1815	gcc tgg aaa Ala Trp Lys	gcg aag aaa Ala Lys Lys 1820	tgc cct 7273 Cys Pro
atg ggc ttc gca t Met Gly Phe Ala 1 1825	tat gac acc cgc Tyr Asp Thr Arg 1830	tgt ttt gac Cys Phe Asp 183	Ser Thr Val	act gag 7321 Thr Glu 1840
aat gac atc cgt g Asn Asp Ile Arg \	gtt gag gag tca Val Glu Glu Ser 1845	atc tac caa lle Tyr Gln 1850	tgt tgt gac Cys Cys Asp	ttg gcc 7369 Leu Ala 1855
ccc gaa gcc aga c Pro Glu Ala Arg C 1860	cag gcc ata agg Gln Ala Ile Arg	tcg ctc aca Ser Leu Thr 1865	gag cgg ctt Glu Arg Leu 1870	Tyr Tie
ggg ggc ccc ctg a Gly Gly Pro Leu 1 1875	act aat tct aaa Thr Asn Ser Lys 188	GIY GIN ASN	tgc ggc tat Cys Gly Tyr 1885	cgc cgg 7465 Arg Arg
tgc cgc gcg agc g Cys Arg Ala Ser G 1890	ggt gta ctg acg Gly Val Leu Thr 1895	acc agc tgc Thr Ser Cys	ggt aat acc Gly Asn Thr 1900	ctc aca 7513 Leu Thr
tgt tac ttg aag g Cys Tyr Leu Lys 7 1905	gcc gct gcg gcc Ala Ala Ala Ala 1910	tgt cga gct Cys Arg Ala 191	Ala Lys Leu	cag gac 7561 Gln Asp 1920
tgc acg atg ctc g Cys Thr Met Leu \	gta tgc gga gac Val Cys Gly Asp 1925	gac ctt gtc Asp Leu Val 1930	gtt atc tgt Val Ile Cys	gaa agc 7609 Glu Ser 1935
gcg ggg acc caa g Ala Gly Thr Gln G 1940	Glu Asp Glu Ala	g agc cta cgg Ser Leu Arg 1945	gcc ttc acg Ala Phe Thr 1950	GIU AIA
atg act aga tac 1 Met Thr Arg Tyr 5 1955	tct gcc ccc cct Ser Ala Pro Pro 196	o Gly Asp Pro	Pro Lys Pro 1965	gaa tac 7705 Glu Tyr

gac ttg gag ttg Asp Leu Glu Leu 1970	ata aca tca Ile Thr Ser 1975	Cys Ser Ser	aat gtg tca gt Asn Val Ser Va 1980		7753
gat gca tct ggc Asp Ala Ser Gly 1985	aaa agg gtg Lys Arg Val 1990	Tyr Tyr Leu	acc cgt gac co Thr Arg Asp Pr 1995	c acc acc 7 o Thr Thr 2000	7801
ccc ctt gcg cgg Pro Leu Ala Arg	gct gcg tgg Ala Ala Trp 2005	gag aca gct Glu Thr Ala 2010	Arg His inr Pr	a gtc aat 7 o Val Asn 2015	7849
tcc tgg cta ggc Ser Trp Leu Gly 2020	Asn Ile Ile	atg tat gcg Met Tyr Ala 2025	Pro Thr Leu Tr	, , , , , , , , , , , , , , , , , , ,	7897
atg atc ctg atg Met Ile Leu Met 2035	act cat ttc Thr His Phe	ttc tcc atc Phe Ser Ile 2040	ctt cta gct ca Leu Leu Ala Gl 2045		7945
ctt gaa aaa gcc Leu Glu Lys Ala 2050	cta gat tgt Leu Asp Cys 205!	Gln Ile Tyr	ggg gcc tgt ta Gly Ala Cys Ty 2060		7993
gag cca ctt gac Glu Pro Leu Asp 2065	cta cct cag Leu Pro Gln 2070	atc att caa Ile Ile Gln	cga ctc cac gg Arg Leu His Gl 2075		8041
gca ttt tca ctc Ala Phe Ser Leu	cat agt tac His Ser Tyr 2085	tct cca ggt Ser Pro Gly 2090	Glu Ile Asn Ar		8089
tca tgc ctc agg Ser Cys Leu Arg 2100	Lys Leu Gly	gta ccg ccc Val Pro Pro 2105	Leu Arg Val Tr		8137
cgg gcc aga agt Arg Ala Arg Ser 2115	gtc cgc gct Val Arg Ala	agg cta ctg Arg Leu Leu 2120	tcc cag ggg gg Ser Gln Gly Gl 2125		8185
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gga Gly	agg Arg	ccg Pro	gcc Ala	atc Ile 885	att Ile	ccc Pro	gac Asp	agg Arg	gaa Glu 890	gtc Val	ctt Leu	tac Tyr	cgg Arg	gag Glu 895	ttc Phe	4489
gat Asp	gag Glu	atg Met	gaa Glu 900	gag Glu	tgt Cys	gcc Ala	tca Ser	cac His 905	ctc Leu	cct Pro	tac Tyr	atc Ile	gaa Glu 910	cag Gln	gga Gly	4537
atg Met	cag Gln	ctc Leu 915	gcc Ala	gaa Glu	caa Gln	ttc Phe	aaa Lys 920	cag Gln	aag Lys	gca Ala	atc Ile	ggg Gly 925	ttg Leu	ctg Leu	caa Gln	4585
aca Thr	gcc Ala 930	acc Thr	aag Lys	caa Gln	gcg Ala	gag Glu 935	gct Ala	gct Ala	gct Ala	ccc Pro	gtg Val 940	gtg Val	gaa Glu	tcc Ser	aag Lys	4633
tgg Trp 945	cgg Arg	acc Thr	ctc Leu	gaa Glu	gcc Ala 950	ttc Phe	tgg Trp	gcg Ala	aag Lys	cat His 955	atg Met	tgg Trp	aat Asn	ttc Phe	atc Ile 960	4681
agc Ser	ggg Gly	ata Ile	caa Gln	tat Tyr 965	tta Leu	gca Ala	ggc Gly	ttg Leu	tcc Ser 970	act Thr	ctg Leu	cct Pro	ggc Gly	aac Asn 975	CCC Pro	4729
gcg Ala	ata Ile	gca Ala	tca Ser 980	ctg Leu	atg Met	gca Ala	ttc Phe	aca Thr 985	gcc Ala	tct Ser	atc Ile	acc Thr	agc Ser 990	ccg Pro	ctc Leu	4777
acc Thr	acc Thr	caa Gln 99	His	acc Thr	ctc Leu	ctg Leu	ttt Phe 1000	Asn	atc Ile	ctg Leu 77	ggg Gly	gga Gly 100	_Trp	gtg Val	gcc Ala	4825

gcc caa ctt gct Ala Gln Leu Ala 1010	cct ccc agc Pro Pro Ser 1015	Ala Ala Ser	gct ttc gta Ala Phe Val 1020	ggc gcc ggc Gly Ala Gly	4873
atc gct gga gcg Ile Ala Gly Ala 1025	gct gtt ggc Ala Val Gly 1030	agc ata ggc Ser Ile Gly	ctt ggg aag Leu Gly Lys 1035	gtg ctt gtg Val Leu Val 1040	4921
gat att ttg gca Asp Ile Leu Ala	ggt tat gga Gly Tyr Gly 1045	gca ggg gtg Ala Gly Val 1050	gca ggc gcg Ala Gly Ala )	ctc gtg gcc Leu Val Ala 1055	4969
ttt aag gtc atg Phe Lys Val Met 1060	Ser Gly Glu	atg ccc tcc Met Pro Ser 1065	acc gag gac Thr Glu Asp	ctg gtt aac Leu Val Asn 1070	5017
cta ctc cct gct Leu Leu Pro Ala 1075	atc ctc tcc Ile Leu Ser	cct ggc gcc Pro Gly Ala 1080	cta gtc gtc Leu Val Val 1085	Gly Val Val	5065
tgc gca gcg ata Cys Ala Ala Ile 1090	ctg cgt cgg Leu Arg Arg 1095	His Val Gly	cca ggg gag Pro Gly Glu 1100	ggg gct gtg Gly Ala Val	5113
cag tgg atg aac Gln Trp Met Asn 1105	cgg ctg ata Arg Leu Ile 1110	gcg ttc gct Ala Phe Ala	tcg cgg ggt Ser Arg Gly 1115	aac cac gtc Asn His Val 1120	5161
tcc ccc acg cac Ser Pro Thr His	tat gtg cct Tyr Val Pro 1125	gag agc gac Glu Ser Asp 1130	Ala Ala Ala	cgt gtc act Arg Val Thr 1135	5209
cag atc ctc tct Gln Ile Leu Ser 1140	Ser Leu Thr	atc act cag Ile Thr Gln 1145	ctg ctg aag Leu Leu Lys	agg ctt cac Arg Leu His 1150	5257
cag tgg atc aac Gln Trp Ile Asn 1155	gag gac tgc Glu Asp Cys	tcc acg cca Ser Thr Pro 1160	tgc tcc ggc Cys Ser Gly 1165	Ser Trp Leu	5305
aga gat gtt tgg Arg Asp Val Trp 1170	gat tgg ata Asp Trp Ile 1175	Cys Thr Val	ttg act gat Leu Thr Asp 1180	ttc aag gcc Phe Lys Ala	5353
tgg ctc cag tcc Trp Leu Gln Ser 1185	aag ctc ctg Lys Leu Leu 1190	ccg cga ttg Pro Arg Leu	ccg gga gtc Pro Gly Val 1195	ccc ttc ttc Pro Phe Phe 1200	5401
tca tgt caa cgt Ser Cys Gln Arg	ggg tac aag Gly Tyr Lys 1205	gga gtc tgg Gly Val Trp 1210	Arg Gly Asp	ggc atc atg Gly Ile Met 1215	5449
caa acc acc tgc Gln Thr Thr Cys 1220	Pro Cys Gly	gca cag atc Ala Gln Ile 1225	acc gga cat Thr Gly His	gtg aaa aac Val Lys Asn 1230	5497
tgt tcc atg agg Cys Ser Met Arg 1235	atc gtg ggg Ile Val Gly	cct agg acc Pro Arg Thr 1240	tgt agt aac Cys Ser Asn 1245	Thr Trp His	5545
gga aca ttc ccc Gly Thr Phe Pro 1250	att aac gcg Ile Asn Ala 125!	_Tyr Thr Thr	ggc ccc tgc Gly Pro Cys 1260 78	acg ccc tcc Thr Pro Ser	5593

ccg gcg cca aat Pro Ala Pro Asn 1265	tat tct agg of Tyr Ser Arg A 1270	gcg ctg tgg Ala Leu Trp	cgg gtg gct Arg Val Ala 1275	gct gag gag Ala Glu Glu 1280	5641
tac gtg gag gtt Tyr Val Glu Val	acg cga gtg g Thr Arg Val 0 1285	ggg gat ttc Gly Asp Phe 1290	cac tac gtg His Tyr Val	acg ggc atg Thr Gly Met 1295	5689
acc act gac aac Thr Thr Asp Asn 1300	Val Lys Cys F	ccg tgt cag Pro Cys Gln 1305	Val Pro Ala	ccc gaa ttc Pro Glu Phe 1310	5737
ttc aca gaa gtg Phe Thr Glu Val 1315	Asp Gly Val A	cgg ttg cac Arg Leu His 1320	agg tac gct Arg Tyr Ala 1325	Pro Ala Cys	5785
aaa ccc ctc cta Lys Pro Leu Leu 1330	cgg gag gag g Arg Glu Glu \ 1335	gtc aca ttc Val Thr Phe	ctg gtc ggg Leu Val Gly 1340	ctc aat caa Leu Asn Gln	5833
tac ccg gtt ggg Tyr Pro Val Gly 1345	tca cag ctc o Ser Gln Leu F 1350	cca tgc gag Pro Cys Glu	ccc gaa ctg Pro Glu Leu 1355	gac gta gca Asp Val Ala 1360	5881
gtg ctc act tcc Val Leu Thr Ser	atg ctc acc of Met Leu Thr A	gac ccc tcc Asp Pro Ser 1370	His Ile Thr	gcg gag acg Ala Glu Thr 1375	5929
gct aag cgt agg Ala Lys Arg Arg 1380	Leu Ala Arg (	gga tct ccc Gly Ser Pro 1385	Pro Ser Leu	gcc agc tca Ala Ser Ser 1390	5977
tca gct agc cag Ser Ala Ser Gln 1395	Leu Ser Ala F	cct tcc ttg Pro Ser Leu 1400	aag gca aca Lys Ala Thr 1405	Cys Thr Thr	6025
cgt cat gac tcc Arg His Asp Ser 1410	ccg gac gct g Pro Asp Ala A 1415	gac ctc atc Asp Leu Ile	gag gcc aac Glu Ala Asn 1420	ctc ctg tgg Leu Leu Trp	6073
cgg cag gag atg Arg Gln Glu Met 1425	ggc ggg aac a Gly Gly Asn 1 1430	atc acc cgc Ile Thr Arg	gtg gag tca Val Glu Ser 1435	gag aat aag Glu Asn Lys 1440	6121
gta gta att ttg Val Val Ile Leu	gac tct ttc ( Asp Ser Phe ( 1445	gag ccg ctc Glu Pro Leu 1450	Gln Ala Glu	gag gat gag Glu Asp Glu 1455	6169
agg gaa gta tcc Arg Glu Val Ser 1460	Val Pro Ala (	gag atc ctg Glu Ile Leu 1465	cgg agg tcc Arg Arg Ser	agg aaa ttc Arg Lys Phe 1470	6217
cct cga gcg atg Pro Arg Ala Met 1475	Pro Ile Trp A	gca cgc ccg Ala Arg Pro 1480	gat tac aac Asp Tyr Asn 1485	Pro Pro Leu	6265
tta gag tcc tgg Leu Glu Ser Trp 1490	aag gac ccg ( Lys Asp Pro 7 1495	gac tac gtc Asp Tyr Val	cct cca gtg Pro Pro Val 1500	gta cac ggg Val His Gly	6313
tgt cca ttg ccg Cys Pro Leu Pro 1505	cct gcc aag g Pro Ala Lys / 1510	gcc cct ccg Ala Pro Pro	ata cca cct Ile Pro Pro 1515 79	cca cgg agg Pro Arg Arg 1520	6361

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agg agg act get get ctg sca gaa act act acc atg ser Ser Ala Leu Ser Glu ser Thro val ser ser Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Ala Leu Ser Ala Leu Ala Ala Leu Ala Ala Leu Ser Ala Leu Ala Leu Ala Leu Ala Leu Ala Leu Ala Ser Pro Asp Glu ser Ser Ser Ala Leu Ala Ala Ser Ala Ser Ala Leu Ala Ser Pro Asp Glu ser Ser Ser Ala Leu Ala Ala Ser Ala Ser Ala Ser Ala Leu Ala Ser Pro Asp Glu ser Ser Ala Leu Ala Ser Pro Asp Glu ser Ser Ala Ser Ala Color Ala Glu Ser Thro Ser Asp Asp Asp Glu Asp Asp Ala Glu Ser Thro Ser Ala Ser Pro Asp Asp Glu Ala Glu Ser Thro Ser Ala Ser Pro Leu Glu Glu Glu Ser Ala Glu Ser Asp Val Glu Ser Asp Glu Ser Asp Glu Ser Thro Ser Ala Ser Ala Color Glu Glu Ser Ala Color Ser Ala Color Glu Glu Ser Asp Glu Ser Ser Met Pro Pro Leu Glu Glu Glu Ala Ser Glu Asp Val Val Cys Cys Ser Met Ser Thro Val Ser 1585  aca ggc gcc ctg agt agg gac gtc gtc gtc gtc gtc gtc gag gag aac acc aca gtg ccc ctg ala Acc ala gtg ca cac tag gcc ala Ala Color Glo Glu Glu Ala Ser Glu Asp Val Val Cys Cys Ser Met Ser Thro Thro Thro Thro Info.  aca ggc gcc ctg agc acc atg gcc atg gcg gag gaa acc aca gc gcc gcc gcc gcc																	
ago gog aco gog aco gog aco goc tct cct gac ago ccc tcc gac gac gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog aco gog gog cct tc cct gac ago gog aco gog gog gog gog gog gog gog gog gog g	aag Lys	agg Arg	acg Thr	gtt val	val	Leu	tca Ser	gaa Glu	tct Ser	Thr	Val	tct Ser	tct Ser	gcc Ala	Leu	Ala	6409
See dly thr Ala Thr Ala See Pro Asp Gln Pro See Asp Asp Gly Asp  gag gas ccc gas gtt gag teg tas tec tec atg ecc ecc ecc ett gag ggg Ala Gly Ser Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu Gly 1570  gag ccg ggg gat ecc gat ett gag teg agg ggg ggg ggg ggg ggg ggg G653  agg gag gag gat gag gat ett agg gag ggg ggg ggg ggg ggg ggg ggg g	gag Glu	ctc Leu	gcc Ala	Thr	Lys	acc Thr	ttc Phe	ggc Gly	Ser	Ser	gaa Glu	tcg Ser	tcg Ser	Ala	Val	gac Asp	6457
aga ccg ggg gat ccc gat ctc agc gac ggg gag gag gga acc aaa ctt gg ccc flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat chan flat	agc Ser	ggc Gly	Thr	Ala	acg Thr	gcc Ala	tct Ser	Pro	Asp	cag Gln	ccc Pro	tcc Ser	Asp	Asp	ggc Gly	gac Asp	6505
gag gag gct agt gag gac gtc gtc gtc gct gat gtc tat acc gcc agc acc acc acc acc acc acc acc	gcg Ala	Ġly	Ser	gac Asp	gtt Val	gag Glu	Ser	Tyr	tcc Ser	tcc Ser	atg Met	Pro	Pro	ctt Leu	gag Glu	ggg Gly	6553
aca ggc gcc ctg atc acg cca tgc ggc gag gag gaa acc acc ttt gcf flu Asp val val cys flat flats  aca ggc gcc ctg atc acg cca tgc gct gcg gag gag gaa acc acc ctg ccc flats flats  atc aat gca ctg agc aac tct ttg ctc cgt cac cac aac ttt gft tat least leu ser Asn ser leu leu Arg His His Asn Leu val Tyr  gct aca aca tct cgc agc gca agc ctg cgg cag aag aag aag gtc acc ttt flats  flats  gct aca aca tct cgc agc gca agc ctg cgg cag aag aag aag gtc acc ttt flats  flats  gct aca aca tct cgc agc gca agc ctg cgg cag aag aag ag gtc acc ttt flats  flats  gct aca aca tct cgc agc gca agc gcc cac tac cgg gag gag gtg ctc aca gag gag Asp val ceu lys Glu  flats  acg aga ctg cag gtc ctg agc gac cac tac cgg gac gtg ctc aag gag  Asp Arg leu Gln val leu Asp Asp His Tyr Arg Asp val ceu lys Glu  flats  flats  gaa gag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag  Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu leu ser val Glu  flats  gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc  glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly  flats  flats  flats  flats  ggg gca aag gca gag gag ctg cga aac cta tcc agc aag acc gtt aac cac  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats  flats	Glu	Pro	ggg Gly	gat Asp	ccc Pro	Asp	Leu	agc Ser	gac Asp	ggg Gly	Ser	Trp	tct Ser	acc Thr	gta Val	Ser	6601
Thr Gly Ala Leu Tie Thr Pro Cys Ala Ala Glu Glu Thr Lys Leu Pro 1630  atc aat gca ctg agc aac tct ttg ctc cgt cac cac aac ttg gtc tat 1640  gct aca aca tct cgc agc gca agc ctg cgg cag aag aag aag gtc acc ttt 1655  gac aga ctg cag gtc ctg gac gac gac agc cac tac cgg gac aga aga gac gtg ctg leu Arg Gln Lys Lys Val Thr Phe 1660  gac aga ctg cag gtc ctg gac gac cac tac cgg gac gg gac gtg ctc aag gag 6841  Ala Thr Thr Ser Arg Ser Ala Ser Leu Arg Gln Lys Lys Val Thr Phe 1660  gac aga ctg cag gtc ctg gac gac cac tac cgg gac gtg ctc aag gag gac leu Asp Asp His Tyr Arg Asp Val Leu Lys Glu 1660  atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag Met Lys Ala Ser Thr Val Lys Ala Lys Leu Leu Ser Val Glu 1695  gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc Glu 1695  gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly 1700  tat ggg gca aag gac gtc cgg aac cta tcc agc agg gcc gtt aac cac acc Tyr Gly Ala Lys Asp Val Arg Asp Leu Ser Ser Lys Ala Val Asn His 1730  atc ggc tcc gtg tgg aag gac ttg ctg gaa gac act gag acc cca att 1740  gac acc acc acc atc atg gca aaa aat gag gtt ttc tgc gtc cac ag ttg ggg Ala Lys Asp Cul Lys Asn Glu Val Phe Cys Val Gln Pro Glu 1750  aag ggg ggc cgc aag cca gct cgc ctt atc gat tcc ca gat ttg ggg T129  Lys Gly Gly Arg Lys Pro Ala Arg Leu Irvo Asp Leu 1770  7129  T129	gag Glu	gag Glu	gct Ala	agt Ser	Glu	Asp	gtc Val	gtc Val	tgc Cys	Cys	ser	atg Met	tcc Ser	tac Tyr	Thr	Trp	6649
The Ash Ala Leu Ser Ash Ser Leu Leu Arg His His Ash Leu Val Tyr 1645  gct aca aca tct cgc agc gca agc ctg cgg cag aag aag aag gtc acc ttt 1650  gac aga ctg cag gtc ctg gac gac gac cac tac cgg gac gac gac gac gac gac gac gac g	aca Thr	ggc Gly	gcc Ala	Leu	ıle	acg Thr	cca Pro	tgc Cys	Ala	Ala	gag Glu	gaa Glu	acc Thr	Lys	Leu	ccc Pro	6697
Ala Thr Thr Ser Arg Ser Ala Ser Leu Arg Gln Lys Lys Val Thr Phe 1650  gac aga ctg cag gtc ctg gac gac cac tac cgg gac gtg ctc aag gag Asp Arg Leu Gln Val Leu Asp Asp His Tyr Arg Asp Val Leu Lys Glu 1665  atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu Leu Ser Val Glu 1685  gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly 1700  tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys Ala Val Asn His 1725  atc cgc tcc gtg tgg aag gac ttg ctg gaa gac act gag aca cct agg aca cct aft arg gag aca acc acc atc atc atc and gca aaa aat gag gtt ttc tgc gtc caa cca atc atc atc atc atc and gca aaa aat gag gtt ttc tgc gtc caa cca acc acc acc acc acc acc acc a	atc Ile	aat Asn	Ala	Leu	agc Ser	aac Asn	tct Ser	Leu	Leu	cgt Arg	cac His	cac His	Asn	Leu	gtc Val	tat Tyr	6745
Asp Arg Leu Gln Val Leu Asp Asp His Tyr Arg Asp Val Leu Lys Glu 1680  atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu Leu Ser Val Glu 1695  gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly 1700  tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys Ala Val Asn His 1720  atc cgc tcc gtg tgg aag gac ttg ctg gaa gac act gag acc acc att In Glu Thr Pro Ile 1730  gac acc acc atc atg gca aaa aat gag gtt ttc tgc gtc caa cca gag Asp Thr Glu Thr Pro Ile 1740  gac acc acc acc atc atg gca aaa aat gag gtt ttc tgc gtc caa cca gag Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu 1760  aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc cca gat ttg ggg 7129  Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly 1775	gct Ala	Thr	Thr	tct Ser	cgc Arg	agc Ser	Ala	Ser	ctg Leu	cgg Arg	cag Gln	Lys	Lys	gtc Val	acc Thr	ttt Phe	6793
gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc 6937 Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly 1700  tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac Asp Thr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys Ala Val Asn His 1715  atc cgc tcc gtg tgg aag gac ttg ctg gaa gac act gag acc act aft Arg Ser Val Trp Lys Asp Leu Leu Glu Asp Thr Glu Thr Pro Ile 1730  gac acc acc atc atg gca aaa aat gag gtt ttc tgc gtc caa cca acc Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu 1760  aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc cca gat ttg ggg Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly 1775  7129	Asp	Arg	ctg Leu	cag Gln	gtc Val	Leu	Asp	gac Asp	cac His	tac Tyr	Arg	Asp	gtg Val	ctc Leu	aag Lys	Glu	6841
Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly 1700  tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac form of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser Intervention of the ser	atg Met	aag Lys	gcg Ala	aag Lys	Ala	Ser	aca Thr	gtt Val	aag Lys	Ala	Lys	ctt Leu	cta Leu	tcc Ser	vai	GIU	6889
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The Arg Ser Val Trp Lys Asp Leu Leu Glu Asp Thr Glu Thr Pro Ile 1730  gac acc acc atc atg gca aaa aat gag gtt ttc tgc gtc caa cca gag Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu 1745  aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc cca gat ttg ggg Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly 1765  7081  7081  7081  7081	tat Tyr	ggg Gly	Ala	Lys	gac Asp	gtc Val	cgg Arg	Asn	Leu	tcc Ser	agc Ser	aag Lys	Ala	Val	aac Asn	cac His	6985
Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu 1745 1750 1760  aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc cca gat ttg ggg 7129 Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly 1765 1770 1775	atc Ile	Arg	Ser	gtg Val	tgg Trp	aag Lys	Asp	Leu	ctg Leu	gaa Glu	gac Asp	Thr	Glu	aca Thr	cca Pro	att Ile	7033
Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly 1765 1770 1775	Asp	Thr	acc Thr	atc Ile	atg Met	Ala	Lys	aat Asn	gag Glu	gtt Val	Phe	Cys	gtc Val	caa Gln	cca Pro	Glu	7081
	aag Lys	ggg Gly	ggc Gly	cgc Arg	Lys	Pro	gct Ala	cgc Arg	ctt Leu	Ile	∨a1 )	ttc Phe	cca Pro	gat Asp	Leu	Gly	7129

gtt cgt gtg tgc gag aaa atg gcc ctt tac gat gtg gtc tcc acc ctc Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Ser Thr Leu 1780 1785 1790	7177
cct cag gcc gtg atg ggc tct tca tac gga ttc caa tac tct cct gga Pro Gln Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser Pro Gly 1795 1800 1805	7225
cag cgg gtc gag ttc ctg gtg aat gcc tgg aaa gcg aag aaa tgc cct Gln Arg Val Glu Phe Leu Val Asn Ala Trp Lys Ala Lys Lys Cys Pro 1810 1815 1820	7273
atg ggc ttc gca tat gac acc cgc tgt ttt gac tca acg gtc act gag Met Gly Phe Ala Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val Thr Glu 1825 1830 1835 1840	7321
aat gac atc cgt gtt gag gag tca atc tac caa tgt tgt gac ttg gcc Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln Cys Cys Asp Leu Ala 1845 1850 1855	7369
ccc gaa gcc aga cag gcc ata agg tcg ctc aca gag cgg ctt tac atc Pro Glu Ala Arg Gln Ala Ile Arg Ser Leu Thr Glu Arg Leu Tyr Ile 1860 1865 1870	7417
ggg ggc ccc ctg act aat tct aaa ggg cag aac tgc ggc tat cgc cgg Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn Cys Gly Tyr Arg Arg 1875 1880 1885	7465
tgc cgc gcg agc ggt gta ctg acg acc agc tgc ggt aat acc ctc aca Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr 1890 1895 1900	7513
tgt tac ttg aag gcc gct gcg gcc tgt cga gct gcg aag ctc cag gac Cys Tyr Leu Lys Ala Ala Ala Cys Arg Ala Ala Lys Leu Gln Asp 1905 1910 1915 1920	7561
tgc acg atg ctc gta tgc gga gac gac ctt gtc gtt atc tgt gaa agc Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu Ser 1925 1930 1935	7609
gcg ggg acc caa gag gac gag gcg agc cta cgg gcc ttc acg gag gct Ala Gly Thr Gln Glu Asp Glu Ala Ser Leu Arg Ala Phe Thr Glu Ala 1940 1945 1950	7657
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gac ttg gag ttg ata aca tca tgc tcc tcc aat gtg tca gtc gcg cac Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala His 1970 1975 1980	7753
gat gca tct ggc aaa agg gtg tac tat ctc acc cgt gac ccc acc acc Asp Ala Ser Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro Thr Thr 1985 1990 1995 2000	7801
ccc ctt gcg cgg gct gcg tgg gag aca gct aga cac act cca gtc aat Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro Val Asn 2005 2010 2015	7849
tcc tgg cta ggc aac atc atc atg tat gcg ccc acc ttg tgg gca agg	7897

atg atc ctg atg act cat ttc ttc tcc atc ctt cta gct cag gaa caa 794 Met Ile Leu Met Thr His Phe Phe Ser Ile Leu Leu Ala Gln Glu Gln 2035 2040 2045	·5
ctt gaa aaa gcc cta gat tgt cag atc tac ggg gcc tgt tac tcc att 799 Leu Glu Lys Ala Leu Asp Cys Gln Ile Tyr Gly Ala Cys Tyr Ser Ile 2050 2055 2060	13
gag cca ctt gac cta cct cag atc att caa cga ctc cac ggc ctt agc 804 Glu Pro Leu Asp Leu Pro Gln Ile Ile Gln Arg Leu His Gly Leu Ser 2065 2070 2075 2080	<b>1</b>
gca ttt tca ctc cat agt tac tct cca ggt gag atc aat agg gtg gct Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg Val Ala 2085 2090 2095	39
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cgg gcc aga agt gtc cgc gct agg cta ctg tcc cag ggg ggg agg gct 818 Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ser Gln Gly Gly Arg Ala 2115 2120 2125	35
gcc act tgt ggc aag tac ctc ttc aac tgg gca gta agg acc aag ctc 823 Ala Thr Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr Lys Leu 2130 2135 2140	13
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